

REMARKS

After entry of this amendment, claims 17 – 23, 25, 26, 28 – 30, 33 – 37, 39, 40, 42, 44 – 47, and 50 – 51 are pending in the present application. Claims 21, 28, 37, 45, and 46 have been amended. Claims 24, 27, 31, 32, 38, 41, 43, 48, 49, 52, 53 have been canceled. In the First Preliminary Amendment, filed with the application, the claims of U.S. Patent No. 6,886,231, hereafter the ‘231 patent, were copied to the present application to provoke interference.

This Second Preliminary Amendment includes amendments to the specification pursuant to M.P.E.P. §§ 2301.01(c) and 608.01(o). M.P.E.P. § 2301.01(c) instructs that before a claim is considered as the basis for a count of interference, the claim should be in allowable and in good form. M.P.E.P. § 608.01(o) instructs the applicant to amend the specification whenever nomenclature in the specification is departed from in order to have clear antecedent basis in the specification. Nomenclature in the specification has been departed from in order to provoke interference, so the nomenclature used in the claims has been added to the specification as indicated below.

Support in the specification for previously-filed claims

1. Amendments to the Specification supporting the independent claims.

As set forth above, the amendments to the specification are made in view of M.P.E.P. §§ 2301.01(c) and 608.01(o). With respect to claims 17, 33, 44, and 50, paragraph [0017] of the application has been amended such that the identification station 24 is alternatively referred to as a gauging station. A comparison between the present application as-filed and the ‘231 patent demonstrates that the identification station of the present application and the gauging station of the ‘231 patent are analogous. In addition, paragraph [0017] has been amended to more clearly state that the location of the valve stem aperture relative to the identification or gauging station is determined to parallel the claim language. The first four sentences of paragraph [0017] state that position of the valve stem aperture is determined by the image taken of the wheel by the camera and that the camera is disposed at the identification station.

With respect to claims 17, 33, 44, and 50, paragraph [0024] has been amended to parallel the claim language that the central axis of the aperture and a longitudinal axis of the valve stem are coaxially aligned with respect to one another prior to insertion of the valve stem through the aperture. This arrangement was set forth in the application as filed using different terminology.

With respect to claims 17, 33, 44, and 50, paragraph [0021] has been amended to parallel the claim language that the robotic apparatus is a programmable robotic manipulator having an arm capable of compound, multi-axial movement. The robotic apparatus 16 described in the specification and shown in the Figures, especially Figure 6, would be recognized by one of ordinary

skill in the art as a programmable robotic manipulator having an arm capable of compound, multi-axial movement.

With respect to claims 44 and 50, paragraph [0021] has been amended to parallel the claim language that the robotic apparatus operably engages the valve stem. The application as filed discloses that the robotic apparatus operably engages the valve stem.

With respect to claims 44 and 50, it is submitted that paragraph [0024] discloses that the valve stem is inserted in the aperture of the rim.

2. Identification of support in the specification for the dependent claims.

With respect to claims 18 and 34, paragraph [0017] discloses a machine vision system in the form of a camera that identifies at least one physical feature of a rim.

With respect to claims 19 and 35, paragraph [0021] discloses a plurality of valve stem delivery stations and that different valve stem configurations are disposed at different valve stem delivery stations. Paragraph [0017] discloses that operations downstream of the identification station are controlled at least in part by the identification of the wheel at the identification station.

With respect to claims 20 and 36, paragraph [0017] discloses identifying a rim as one of a plurality of different rims in response to inspection with a machine vision system.

With respect to claims 22 and 46, paragraph [0021] discloses tightening a nut on a threaded valve stem.

With respect to claims 23 and 37, paragraph [0021] discloses a nut runner mounted on a robotic apparatus.

With respect to claims 25 and 39, Figure 6 shows valve stems (unnumbered) valve stems being conveyed, or supplied, in serial fashion.

With respect to claims 29 and 45, paragraphs [0021] – [0025] disclose actuating a robotic manipulator to move a valve stem to a rim. Applicants note that claims 29 and 45 recite steps separate from the moving step recited in the independent method claims.

With respect to claims 30, 42, 47 and 51, paragraph [0021] and Figures 1 and 4 – 10 disclose grasping a valve stem with the robotic manipulator computer-controlled and having a valve-stem-gripper-attachment articulatable and positionable to be in a predetermined orientation with respect to the aperture in the rim.

Support in United States Patent No. 6,886,231 for Claims

The new claims recited in United States Patent No. 6,886,231 derive support solely from Column 11, line 65 through Column 12, line 22 and new Figures 7 and 8. This new content was added to overcome 35 U.S.C. 112 rejection from parent United States Patent Number 6,481,083 for lack of support in the original specification for the claims that have been allowed in the '231

Patent. Applicant respectfully contends that the specification of the '231 patent still lacks support for the claims to overcome a 35 U.S.C. 112 rejection. For example, movement of the wheel once the video camera 430 has located the aperture 426 in the rim 412 requires a second identification prior for inserting the valve stem 428 into the aperture 426 as the robot holding the valve stem 428 will no longer know where the aperture 426 is. This defective design requires a secondary visioning system, preferably mounted on the robot arm to more precisely locate the aperture as is disclosed in the present application. Furthermore, the gripper 438 disclosed in the '231 application is not capable of inserting the valve stem 428 into an aperture in the rim 412. First, the gripper 438 is gripping the narrow shaft of the valve stem 428 which prevents the gripper from 438 from inserting the narrow shaft of the valve stem 428 through the aperture in the rim 412. Furthermore, the rubber grommet of the valve stem 428 must be inserted from the back side (inside) of the rim 412 so it is concealed by the tire after attachment. The disclosed gripper 438 is not capable of inserting the valve stem 428 into the aperture from the back side of the rim 412.

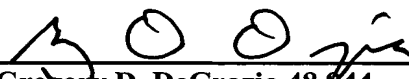
Conclusion

It is submitted that the amendments have antecedent basis in the application as filed and that the amendments do not add new matter to the application. If the Examiner believes that prosecution of the application can be expedited by way of an Examiner's amendment, the Examiner is invited to contact the Applicants' attorney at the telephone number listed below.

Respectfully submitted,

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